<center>**REMARKS**</center>

The application includes claims 1-18 prior to entering this response.

The examiner rejects claims 1-18 on the ground of nonstatutory double patenting over claims 1-4 and 6-15 of U.S. Patent No. 6,704,055, since the claims, if allowed, would improperly extend the right to exclude already granted in the patent.

The examiner rejects claims 1, 7 and 13 under 35 U.S.C. § 102b as being anticipated by Liou et al. (U.S. Patent 5,835,163).

The application remains with claims 1-18 after entering this response.

The applicants add no new matter and request reconsideration.

<center>**Double Patenting Rejection**</center>

The applicant submits a terminal disclaimer to obviate the examiner's rejection.

<center>**Claim Rejections Under § 102**</center>

The examiner rejects claims 1, 7 and 13 as being old over Liou. The applicant traverses the rejection for the reasons that follow.

The patent disclosure under consideration teaches methods for *detecting 3:2 pull-down mode* utilizing fuzzy logic based systems using an accumulated sum of absolute value of luma difference between two fields. In contrast, Liou teaches an apparatus for *detecting a cut in video* comprising arrangements for acquiring video images from a source, for deriving from the video images a pixel-based difference metric, for deriving from the video images a distribution-based difference metric, and for measuring video content of the video images to provide up-to-date test criteria. In Liou, arrangements are included for combining the pixel-based difference metric and the distribution-based difference metric, taking into account the up-to-date test criteria provided so as to derive a scene change candidate signal and for filtering the scene change candidate signal so as to generate a scene change frame list. Abstract.

Regarding claim 1, the examiner alleges Liou's apparatus not only involves detecting scene cuts but also detecting pull-down formats, of which 3:2 conversion ratio is exclusively applied to the NTSC frame/field format. The examiner cites Liou's column 14, lines 49-52. In this passage and elsewhere, however, Liou discloses that detecting scene cuts involves an

understanding of both shot types (i.e., static shots, camera moves, and tracking shots) and video conversion from film. "In any case, certain video frames are made up of two fields with totally different (although consecutive) pictures in them. As a result, the digitizer can only take one field from each video frame in order to maintain good picture quality. This will result in duplicated frames and almost zero interframe differences at five frame intervals in all four cases of 3:2 pulldown." Column 12, lines 32-37. For this reason, many scene cut detection methods, particularly those based on pixel-based differences, base their detection on difference metrics "collected in a five or seven frame interval centered around the current frame." Column 12, lines 8-43.

While Liou's scene cut detection method accounts for "observation outliers" created by both shot changes and 3:2 pulldown conversion, it does not actually detect the film mode conversion itself. Column 14, lines 49-50. This proposition is buttressed by Liou's mention of the term "3:2" exactly six times in the specification (column 5, line 1; column 12, lines 15 and 38; column 14, line 49 and column 15, lines 28 and 43). In none of those mentions does Liou disclose detecting 3:2 pulldown film mode conversion.

Moreover, it seems that the examiner is using the terms "detecting scene cut" and "detecting 3:2 pull-down format" interchangeably, as evident from the office action, page 4, line 12 ("*The scene cut or 3:2 pull down format is thereby identified…*"). The applicant agrees that Liou teaches an apparatus for detecting scene cuts, but disagrees that the terms are interchangeable notwithstanding the mention of 3:2 pulldown.

Additionally, the examiner alleges that Figure 7 is a composite system apparently meaning that Liou teaches detecting both scene cuts and 3:2 pulldown format. Figure 7, however, is a decision unit that produces a final scene change list or cut detection (lines 56-58, column 19). In none of the various blocks shown in Figure 7 is 3:2 pulldown conversion detected (see column 19, lines 48-58).

The examiner further points out to column 24, line 25 and alleges that the teaching of Liou applies to NTSC format. The examiner appears to take the disclosure out of context since column 24, lines 23-25 disclose a *cut detection algorithm, which may be applied to* various formats, including *NTSC format*. This is in contrast with the claim 1 that recites a method for *3:2 pull-down film mode detection* of a stream of NTSC video fields.

The examiner alleges Liou generates from a video sequence, an accumulation of absolute value of sums of the difference between two fields. What Liou actually discloses at column 2, lines 49-57, is a fuzzy engine to compute a significance level using *image contrast and motion estimates* (given by equations in column 20, lines 41 and 47), which is different from an *accumulated sum of absolute value of luma difference between two fields* as required by claim 1. The examiner concludes that Liou generates frame/field identifiers using fuzzy logic using the pixel-to-pixel data, referring to Figure 9 and column 20, lines 54-64. The flowchart of Figure 9, however, outputs new significance level estimation that is used for *cut detection* (see Fig. 7 and column 19, lines 52-58, where the new significance level estimation is used to generate scene change frame list or cut detection).

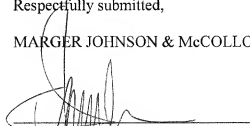Claims 7 and 13 include limitations similar to those discussed above.

Claims 1-18 should be in condition for the examiner's allowance.

Conclusion

The applicants request reconsideration and allowance of all remaining claims. The examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

Respectfully submitted,

MARGER JOHNSON & McCOLLOM, P.C.

Graciela G. Cowger
Reg. No. 42,444

MARGER JOHNSON & McCOLLOM, P.C.
210 SW Morrison Street, Suite 400
Portland, OR 97204
503-222-3613

Customer No. 20575